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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,576	01/27/2004	David Maxwell Cannon	SJO920030087US1	3882
46917 7590 01/10/2008 KONRAD RAYNES & VICTOR, LLP. ATTN: IBM37 315 SOUTH BEVERLY DRIVE, SUITE 210 BEVERLY HILLS, CA 90212			EXAMINER NGUYEN, MERILYN P	
			ART UNIT 2163	PAPER NUMBER
			MAIL DATE 01/10/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/766,576	Applicant(s) CANNON ET AL. mn	
	Examiner Merilyn P. Nguyen	Art Unit 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-10,14,15,17-23,27,28,30-36,40,41,43-46,50 and 53 is/are rejected.
- 7) ☒ Claim(s) 3,11-13,16,24-26,29,37-39,42,47-49,51,52 and 54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a):
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In response to the communication dated 10/16/2007, claims 1-54 are active in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-10, 14-15, 17-23, 27-28, 30-36, 40-41, 43-46, 50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon (US 6,098,074) in view of Mattis (US 6,453,319).

Regarding to Independent Claims 1, 14, 27, 40 and 50, discloses a data backup management, an article of manufacture for managing data, wherein the article of manufacture causes operations to be performed, a server for managing data for use with at least one data storage device and with a plurality of client stations, and an subsystem for managing data for user with a plurality of client stations, wherein the following claims (indicated above) are utilizing the same functionalities, wherein Cannon teaches a data management, an article of manufacture for managing data, a server for managing data for use with at least one data storage device and with a plurality of

client stations and an subsystem for managing data for user with a plurality of client stations, each client station having user files, comprising:

a plurality of data storage devices wherein at least one data storage device has a retrieval pool adapted to store user files'(see abstract, Cannon);

a digital data processing apparatus coupled to the storage devices, wherein the digital data processing apparatus is programmed to perform a data management method, said method comprising:

receiving multiple user files from at least one client station coupled to a data storage subsystem (column 2, lines 15-16, wherein the subsystem receives multiple user files from a client station, Cannon);

storing at least some of the multiple user files in a retrieval storage pool at a first location in the data storage subsystem (column 12, lines 52-54, wherein the subsystem performs the request archival action by storing the user file in the storage hierarchy 113 and wherein lines 54-56, describe the various techniques that may be employed to determine where files are stored in the storage hierarchy 114/400, and wherein diagram 400 is illustrated in Figure 4, which illustrates multiple levels, Cannon);

creating a managed file comprising an aggregation of at least some of the multiple user files (column 2, lines 17-19, wherein creates a contiguous managed file by aggregating selected received user files in accordance with certain predetermined criteria, Cannon);

Cannon does not teach: applying first predetermined criteria to a user file stored in the retrieval storage pool to designate the user file in the retrieval storage pool as one of a higher priority and a lower priority.

Cannon does not teach: deleting from said retrieval storage pool a user file designated as lower priority; and Cannon does not teach: retaining in said retrieval storage pool a user file designated as higher priority.

On the other hand, Mattis teaches: applying first predetermined criteria to a user file stored in the retrieval storage pool to designate the user file in the retrieval storage pool as one of a higher priority and a lower priority (column 21, lines 39-45, wherein for each of storage device, the cache stores or can access a value indicating the amount of disk space in a pool that is currently storing active data, wherein the cache also stores constant low water mark and high water mark values, Mattis).

Mattis teaches: deleting from said retrieval storage pool a user file designated as lower priority; and retaining in said retrieval storage pool a user file designated as higher priority (Figure 8A, diagrams 802-808, and column 22, lines 14-15 wherein it determines Whether a fragment should be deleted and therefore an evaluation is performed and column 22, lines 18-26, respectively, wherein it is desirable for a garbage collector to retain objects that minimize server download time, in which the term "minimize" is equivalent to "low priority", and to minimize server traffic, it is desirable for a garbage collector to retain objects that are large, wherein the phrase "retain object that are too large" is equivalent to "high priority", and wherein a garbage collector by

definition is defined to locate data objects that can no longer be used and makes their memory available for reuse, which is interpreted to correspond to a retrieval storage pool, Mattis).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to incorporate Mattis teachings into Cannon system. A skilled artisan would have been motivated to combine as suggest by Mattis [Figure 8A, diagrams 802 and 803] for implementing a space efficient storage based on a high and low importance to optimize the overall performance of the system.

Regarding to dependent Claims 2, 15, 28, and 41, most of the limitations of these claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the combination of Cannon in view of Mattis (as modified) teaches retaining in said retrieval storage pool a user file designated as higher priority (Figure 8A, diagram 803, Cannon).

Regarding to dependent Claims 4, 17, 30, and 43, most of the limitations of these claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the combination of Cannon and Mattis (as modified) teaches wherein said retrieval storage pool is located in a disk storage (columns 7-8, lines 64-67 and lines 1-8, wherein the storage pool identifies a subset of the storage hierarchy wherein the managed files resides and wherein each storage pool is a group of storage devices of the storage hierarchy, wherein for instance each of the DASD's, DASD's, optical disk, tapes, and tapes may be divided into one or more storage pools, Cannon).

Regarding to dependent Claims 5, 18, 31 and 44, most of the limitation of these claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the combination of Cannon and Mattis (as modified) teaches wherein said managed file creating includes copying user files to an aggregation storage pool and designating, the aggregation of user files in the aggregation storage pool as a single file in a database (column 14, lines 42-54, wherein respectively, Cannon).

Regarding to dependent Claims 6, 19, 32, and 45, most of the limitations of these claims have been noted in the rejection to claims 5, 18, 31, and 44. In addition the combination of Cannon and Mattis (as modified) teaches Ulrich teaches transferring said managed file from said aggregation storage pool to another location within a data hierarchy in the data storage subsystem (column 14, lines 58-61, wherein the subsystem copies the designated files from a source location to a target location in the storage hierarchy, Cannon).

Claims to dependent claims 7, 20 and 33, most of the limitations of these claims have been noted in the rejection to claims 5, 18, and 31. In addition the combination of Cannon and Mattis (as modified) teaches wherein said copying includes copying user files from the retrieval storage pool to the aggregation storage pool (column 12, line 41-54, wherein a client system sends one or more user files for storage by the subsystem, wherein the interface receives a user

file for archival, wherein the subsystem performs the request archival action by storing the user file in the storage hierarchy, Cannon).

Regarding to dependent Claims 8, 21 and 34, most of the limitations of these claims have been noted in the rejection to claims 5, 18, and 31. In addition, the combination of Cannon and Mattis (as modified) teaches wherein said aggregation storage pool is located in a tape storage (column 5, lines 49-53, wherein in the context of the storage hierarchy 114/400 term storage pool is used to identify the groups of storage devices with similar performance characteristics, wherein for instance level 404 may be Comprised of several storage pools, each pool including one or more DASD's and column 8, lines 2-4, each of the DASD's, optical disk, tape and tapes may be divided into one or more storage pools, Cannon).

Regarding to dependent Claims 9, 22, and 35, most of the limitations of these claims have been noted in the rejection to claims 6, 19, and 32. In addition the combination of Cannon and Mattis (as modified) teaches wherein said managed file is migrated to a tape storage (columns 7-8, lines 64-67 and lines 1-7, respectively, Cannon).

Regarding to dependent Claims 10, 23, 36, and 46, most of the limitations of these claims have been noted in the rejection to claims 1, 14, 27, and 40. In addition the combination of Cannon and Mattis (as modified) teaches copying received user

files to an aggregation storage pool wherein said managed file creating includes creating a managed file comprising a contiguous aggregation of said user files copied to said aggregation storage pool (column 2, lines 17-19; column 2, lines 29-32, and column 12, lines 21-24, respectively, Cannon).

Regarding Claims 53, Refer to claims 1, 14, 27, 40, and 50, wherein the following limitations are substantially the same/or similar and therefore rejected under the same rationale.

Allowable Subject Matter

3. Dependent Claims 3, 11-13, 16, 24-26, 29, 37-39, 42, 47-49, 51-52, and 54 are allowed over prior art. For example, prior art does not teach first predetermined criteria include the status of the user file as one of active and inactive wherein an active user file currently resides on said client station and is designated a higher priority user file, and an inactive user file once resided on a client station but has been subsequently at least one of modified and deleted on said client station, and is designated a lower priority user file as disclosed in dependent claims, 13,16, 26, 29, 39, 42,49 and 51.

Response to Arguments

4. Applicant's arguments filed 10/16/2007 have been fully considered but they are not persuasive.

Applicant argues, “the deficiencies of the Cannon reference are not met by the Examiner's citations to the Mattis reference. More specifically, it is believed that the Examiner's citations to the Mattis reference relate to operations of a *cache in a proxy server* (Mattis, col. 6, lines 46-60) rather than backing up multiple user files in retrieval storage pools and managed files as required by claim 1.” The Examiner respectfully disagrees. Column 21, lines 39-45 recites “for each pool 200a-200n of a storage device 90a, the cache stores or can access a value indicating the amount of disk space in a pool that is currently storing active data. The cache also stores constant “low water mark” and “high water mark” values, as indicated by block 803”. This clearly indicate that the caches stores criteria such as “high water mark” value (corresponds to higher priority) and “low water mark” value (corresponds to lower priority) to designate data in each pool 200a-200n (corresponds to “retrieval storage pool”).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Application/Control Number:
10/766,576
Art Unit: 2163

Page 10

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Merilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.



Merilyn Nguyen



WILSON LEE
PRIMARY EXAMINER